What is claimed is:

1. A method of casting in a casting machine including a casting die, in which a feeder head is provided between a metal inlet and a cavity and in which heat insulating of the feeder head is greater than that of the cavity so as to make cooling rate of the feeder head lower than that of the cavity,

said method comprising the steps of:

pouring a molten metal into the cavity;

reacting the molten metal on a deoxidizing compound in the cavity so as to deoxidize an oxide film formed on a surface of the molten metal; and

supplementing the molten metal in the feeder head to the cavity when the molten metal in the cavity is solidified and shrinked.

2. The method according to claim 1,

wherein the cooling rate of the cavity is 500° C/min or more, and

the cooling rate of the feeder head is less than 500 ° C/min..

3. The method according to claim 1,

wherein the molten metal is aluminium or aluminium alloy,

the cooling rate of the molten metal in the cavity is adjusted to make average clearance between dendrites of solidified aluminium or aluminium alloy in the cavity less than 25 μ m, and

the cooling rate of the molten metal in the feeder head is adjusted to make average clearance between dendrites of solidified aluminium or aluminium alloy in the feeder head 25 μ m or more.

4. The method according to claim 1,

wherein an inner face of the feeder head is coated with heat insulating lubricant, and

an inner face of the cavity is coated with no heat insulating lubricant.

5. The method according to claim 1,

wherein heat insulating of a material of the casting die, which forms the feeder head, is greater than that of a material of the casting die, which forms the cavity.

6. The method according to claim 1,

wherein temperature of an inner face of the cavity is less than 300 ° C while casting.

7. The method according to claim 1,

wherein an inner face of the cavity is compulsorily cooled by cooling means.

8. The method according to claim 1,

wherein an adapter of the casting die is detachably attached to a cavity part of the casting die.

9. The method according to claim 1,

wherein an adapter of the casting die includes: the feeder head; a first path for introducing the molten metal to the feeder head; and a second path for introducing a material of the deoxidizing compound to the cavity so as to form the deoxidizing compound in the cavity.

10. The method according to claim 1,

wherein the molten metal is aluminium or aluminium alloy, and

the deoxidizing compound is a magnesium nitride compound, which is formed by reacting a magnesium gas on a nitrogen gas.

11. A casting machine,

comprising a casting die, which includes:

a metal inlet, from which a molten metal is poured into said casting die;

a cavity, in which the molten metal is solidified so as to cast a product; and

a feeder head being provided between said metal inlet and said cavity, in which heat insulating of the feeder head is greater than that of said cavity so as to make cooling rate of said feeder head lower than that of said cavity,

wherein the molten metal is reacted on a deoxidizing compound in said cavity so as to deoxidize an oxide film formed on a surface of the molten metal, and

the molten metal in said feeder head is supplemented to said cavity when the molten metal in said cavity is solidified and shrinked.

12. The casting machine according to claim 11,

wherein the cooling rate of the cavity is 500° C/min. or more, and

the cooling rate of the feeder head is less than 500 ° C/min..

13. The casting machine according to claim 11,

wherein the molten meal is aluminium or aluminium alloy,

the cooling rate of the molten metal in said cavity is adjusted to make average clearance between dendrites of solidified aluminium or aluminium alloy in said cavity less than 25 μm, and

the cooling rate of the molten metal in said feeder head is adjusted to make average clearance between dendrites of solidified aluminium or aluminium alloy in said feeder head 25 μ m or more.

14. The casting machine according to claim 11,

wherein an inner face of said feeder head is coated with heat insulating lubricant, and

an inner face of said cavity is coated with no heat insulating lubricant.

15. The casting machine according to claim 11,

wherein heat insulating of a material of said casting die, which forms said feeder head, is greater than that of a material of said casting die, which forms said cavity.

16. The casting machine according to claim 11,

further comprising means for compulsorily cooling an inner face of said cavity.

17. The casting machine according to claim 11,

wherein an adapter of said casting die is detachably attached to a cavity part of said casting die.

18. The casting machine according to claim 11,

wherein an adapter of said casting die includes: said feeder head; a first path for introducing the molten metal to said feeder head; and a second path for introducing a material of the deoxidizing compound to said cavity so as to form the deoxidizing compound in said cavity.

19. The casting machine according to claim 11,

wherein volume of said feeder head is 5-20 % of volume of said cavity.